TEST REPORT

Reference No.	:	WTD21D01008815W002
FCC ID	:	2ALCVCKS1521
Applicant	:	Emerson Radio Corp.
Address	:	35 Waterview Blvd, Parsippany, New Jersey 07054, United States
Manufacturer	:	HE XUN ELECTRONICS CO., LTD
Address	:	The 3rd Floor, Workshop, Shiwu (Huizhou Fuersheng Wire and Cable Co., LTD.), Queen Village, Zhenlong Town, Huiyang District, Huizhou city, Guangdong Province, China.
Product	:	SmartSet Alarm Clock Radio
Brand Name	:	Emerson
Model(s)	:	CKS1521, CKS1522, CKS1523
Standards	:	FCC Part 1.1307
Date of Receipt sample	:	2021-01-27
Date of Test	:	2021-01-27 to 2021-03-11
Date of Issue	:	2021-03-11
Test Result	:	**Pass**

Remarks:
The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

Prepared By:
Waltek Testing Group Co., Ltd.
Address: No. 77, Houjie Section, Guantai Road, Houjie Town, Dongguan City, Guangdong, China
Tel: +86-769-2267 6998
Fax: +86-769-2267 6828

Compiled by:

Estel Qian / Project Engineer

Approved by:

Daniel Liu / Designated Reviewer

2. Contents

Page

1 COVER PAGE 1
2. CONTENTS 2
3. REVISION HISTORY 3
4. GENERAL INFORMATION 4
4.1. GENERAL DESCRIPTION OF E.U.T. 4
4.2. DETAILS OF E.U.T. 4
5. TEST SUMMARY 5
6. RF EXPOSURE 6
6.1. REQUIREMENTS 6
6.2. THE PROCEDURES / LIMIT 6
6.3. MPE CALCULATION METHOD 7
6.4. RESULT: COMPLIANCE 7

3. Revision History

Test report No.	Date of Receipt sample	Date of Test	Date of Issue	Purpose	Comment	Approved
WTD21D01008815 W002	2021-01-27	2021-01-27 to 2021-03-11	2021-03-11	Original	-	Valid

4. General Information

4.1. General Description of E.U.T.

Product:	SmartSet Alarm Clock Radio
Model(s):	CKS1521, CKS1522, CKS1523
Model difference:	All models are same in all respects, only the model names are different for different market requirement. The test sample's model is CKS1521.
Operation Frequency:	2402-2480MHz, 79 Channels in total
Antenna installation:	PCB Printed Antenna
Antenna Gain:	-0.58dBi
Type of Modulation:	GFSK, π/4DQPSK
Hardware Version:	REV 1.0
Software Version:	V3.3

4.2. Details of E.U.T.

Max. RF output power:	-3.82dBm
Ratings:	Input: 120V AC ~ 60Hz DC 3V by CR2032 Lithium Battery (clock backup) USB output: 5V⎓1.5A
Adapter:	Refer to following table

Adapter	Manufacturer	M/N	Rating
Main Adapter	DONGGUAN GURONG ELECTRONIC CO., LTD	GQ07-050150-DU	INPUT: 120V AC ~ 60Hz POWER CONSUMMPTION: 15W
Alternate Adapter	GUANGDONG KEERDA ELECTRONIC CO., LTD	DZ007AHL050150U	

5. Test Summary

Test Items	Test Requirement	Result
Maximum Permissible Exposure (Exposure of Humans to RF Fields)	1.1307	PASS

6. RF Exposure

Test Requirement: FCC Part 1.1307

Evaluation Method: FCC Part 2.1091 & KDB 447498 D01 General RF Exposure Guidance v06

6.1. Requirements

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device.

6.2. The procedures / limit

(A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm^2)	Averaging Time $\|E\|^2$,$\|H\|^2$or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100,000			5	6

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm^2)	Averaging Time $\|E\|^2$,$\|H\|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz; *Plane-wave equivalent power density

6.3. MPE Calculation Method

$$S = \frac{P \times G}{4 \times \pi \times R^2}$$

S = power density (in appropriate units, e.g. mW/cm^2)
P = output power to the antenna (in appropriate units, e.g., mW).
G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain.
R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

From the peak EUT RF output power, the minimum mobile separation distance, R=20cm, as well as the gain of the used antenna, the RF power density can be obtained

Antenna Gain (dBi)	Antenna Gain (numeric)	Max. conducted Output Power (dBm)	Max. conducted Output Power (mW)	Power Density (mW/cm2)	Limit of Power Density (mW/cm2)	Reult
-0.58	0.875	-3.82	0.41	0.000072	1	Compliance

6.4. Result: Compliance

No SAR measurement is required.

======End of Report======